

Smokeless Tobacco in Taif University: Awareness, Prevalence among Healthcare Students

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Abstract

Objective: To assess the level of awareness among male medical and dental students of Taif University, about the relation between tobacco chewing and oral cancer.

Materials and Methods: The study was conducted during the period of September 2017 to January 2018. Study involved face-to-face interview and recording the response to the pretested close ended questionnaire from, male medical and dental students of Taif University, Taif, Saudi Arabia.

Statistical analysis: Data presentation and statistical analysis were performed with SPSS INC Chicago link version 17. The intra-group comparison was done using Kruskal-Wallis H, Mann-Whitney U test for inter group comparison and Chi-square test.

Results: More than 75% of medical and dental students included in this study didn't agree that they have ever chewed Shamma or Qat. For those who admitted to use Shamma and Qat, the majority agreed that they do during ceremonial occasions. Regarding the prevalence of the habit among their family members, the percentage ranged between 62% and 74% among the medical and dental students. Data analysis showed that more than 75% of the included subjects were aware of the ill effects of tobacco chewing on health, especially oral cancer. However, only a small percentage of them (< 37%) agreed that they tried to help others quitting the habit.

Conclusion: The current study showed a high level of awareness about the harmful effects of tobacco chewing, together with a low prevalence of the habit, among dental and medical students of Taif University. However, the students' impact on increasing awareness of their community and their role in helping people stopping this harmful habit, was found negative.

Keywords: Tobacco Chewing; Awareness; Prevalence

Introduction

Smokeless tobacco is a tobacco product that is used by means other than smoking. These uses include chewing, sniffing, placing the product in oral vestibule, or application to the skin. Approximately 28 chemical constituents in smokeless tobacco are reported to be carcinogenic in nature, among which nitrosamine is the most prominent [1,2].

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Although considered illegal in KSA, Shamma and Qat chewing is a common form of smokeless tobacco that is habitually used among some populations in the Kingdom [3,4]. Several studies have reported that the high incidence of oral cancer in the southwestern region of Saudi Arabia, and especially in Jazan province, was correlated to the wide spread use of Shamma and Qat in that area [3-6]. The most frequently reported sites of oral cancer among Shammah users were tongue, oral vestibule, floor of mouth, retromolar trigone and buccal mucosa [5,7].

It has been reported that lack of public knowledge and awareness is the most significant factor in delaying diagnosis and treatment of oral cancer [8-11]. This highlights the need for an extensive awareness campaigns on issues related to oral cancer, correlating it to risk factors like smokeless tobacco.

Healthcare professionals can play a vital role in educating their patients about the health risks of tobacco use and in acting as role models for their patients [10,12]. Hence this study was conducted in Taif University, KSA to assess the level of awareness among male medical and dental students about the relation between tobacco chewing and oral cancer.

Aim of the Study

The study aimed to prepare them for their future role in increasing awareness of the community to the dangers of some traditional habits.

Materials and Methods

Study involved face-to-face interview and recording the response to the pretested close ended questionnaire (pilot study on 15 adolescents for clarity in understanding questions and frank response) from, male medical and dental students of Taif University, Taif, Saudi Arabia. All the dental and medical students who gave written informed consent were included in the study. The study was conducted during the period of September 2017 to January 2018. The reliability of the questionnaire was assessed by asking 20 subjects to complete it through face-to-face interview. Cronbach alpha was used as a measure of reliability ($\alpha = 0.75$). Ethical clearance for the study was obtained from the ethical committee of Faculty of Dentistry, Taif University, KSA prior to starting the study and written informed consent was taken from study participants.

Questionnaire for the study

Included five domains- a. Socio-demographic details; b. prevalence of tobacco (Shamma or Quat) chewing habit (13 questions); c. Knowledge regarding harmfulness of tobacco chewing (9 questions); d. Attitude and practice (7 questions); with a response in agree/disagree/don't know options. All questionnaires were prepared in local language for better understanding.

Statistical analysis

Data presentation and statistical analysis were performed with Statistical Package for Social Science version 17 (SPSS INC Chicago link). The intra-group comparison was done using Kruskal-Wallis H followed by Mann-Whitney U test for inter group comparison and Chi-square test. The level of significance was set at $p < 0.05$.

Results

One hundred forty six subjects were included in the present study (dental students - 77, medical students - 66). Socio-demographic details of study participants were explained in table 1. Eighteen (23.3%) and 12 (18.1%) of dental and medical students admitted that they use Shamma smokeless tobacco respectively. Main reason for tobacco chewing was need for mood change (Table 2).

Variable	Dental students (n = 77)	Medical students (n = 66)
Age in years		
18 - 25	77	66
Fathers education		
Illiterate	8	3
Intermediate or less	12	14
High school	24	20
University or higher	33	29
Mothers education		
Illiterate	9	11
Intermediate or low	23	15
High school	16	22
University or higher	29	18

Table 1: Distribution of study participants according to socio-demographic details.

Variable		Dental students n	%	Medical students n	%	Chi-square, p value
Have you ever chewed Shamma?	Yes	18	23.3	12	18.1	0.08
	No	59	76.6	53	80.3	0.07
	Don't know	0	0	1	1.5	NA
Have you ever chewed Qat?	Yes	9	11.7	8	12.1	0.13
	No	67	87	57	86.4	0.2
	Don't know	1	1.3	1	1.5	0.1
Place of Qat or shamma chewing	In my house	6	7.8	3	4.5	0.13
	In my friends house	2	2.6	2	3.03	0.2
	In university	1	1.3	0	0	NA
	In public places	2	2.6	4	6.06	0.3
	In ceremonial occasions	7	9.09	21	31.8	0.02
Is it easy to obtain shamma or qat	Other places	6	7.8	3	4.5	0.08
	Yes	30	39	25	37.8	0.08
	Yes to some extent	13	16.9	15	22.7	0.06
From where do you get Shamma or Qat	No	9	11.7	10	15.1	0.2
	From sellers	10	13	14	21.2	0.02
	I give money to someone to buy for me	1	1.3	3	4.5	0.3
	I take some of it from another person	7	9.09	1	1.5	NA
At what age did you started using shamma or Qat	Other	2	2.6	16	24.2	0.02
	Less than 10 years of age	3	3.9	2	3.03	0.19
	10 to 19 years of age	8	10.4	6	9.09	0.2
When do you chew shamma or qat	More than 19 years of age	7	9.09	9	13.6	0.08
	At morning	7	9.09	0	0	NA
	At noon	4	5.2	3	4.5	0.2
	At after noon	6	7.8	8	12.1	0.08
	At evening	1	1.3	0	0	NA
How Frequently do you chew shamma or qat	At night	5	6.5	7	10.6	0.08
	Daily	8	10.4	11	16.7	0.19
	Most of the weekdays	7	9.09	3	4.5	0.2
	Only at weekends	3	3.9	2	3.03	0.1
	Ceremonial occasion	1	1.3	0	0	NA

With whom do you chew shamma or qat	Alone	5	6.5	2	3.03	0.08
	Family (father/mother/brother/sister/wife)	4	5.2	1	1.5	0.2
	Relatives	1	1.3	3	4.5	0.6
	Friends	9	11.7	11	16.7	0.12
Why do you chew shamma or Qat	When feeling stressed	7	9.09	7	10.6	0.18
	During anxiety	11	14.3	17	25.8	0.08
	Need to change mood	57	74.02	41	62	0.06
	Other reason	2	2.6	0	0	NA
Do you smoke cigarette or pipe	Yes	19	24.7	15	22.7	0.41
	No	57	74.02	51	77.3	0.21
How many of your family members use shamma and quat	No one	7	9.09	7	10.6	0.21
	Few	11	14.3	17	25.8	0.08
	Most of them	57	74.02	41	62	0.06
	I don't know	2	2.6	0	0	NA
How many of your friends use shamma and qat	No one	12	15.6	18	27.3	0.3
	Few	33	42.9	19	28.8	0.02
	Most of them	20	26	15	22.7	0.2
	I don't know	12	15.6	14	21.2	0.3

Table 2: Distribution of students according to prevalence of Shamma or Qat chewing.

Table 3 gives information about knowledge regarding harmful effects of tobacco chewing. Twenty (27.3%) and 3 (4.5%) dental and medical students agreed that chewing of Shamma is more harmful and the difference was statistically significant (p = 0.01).

Questionnaire	Dental students n (%)	Medical students n (%)	Chi-square, p value
Do you think chewing shamma or qat causes serious problem to one's health?	66 (85.7)	56 (84.8)	0.43
Do you believe chewing shamma or qat causes harm to your health?	64 (83.1)	49 (74.2)	0.7
Chewing of shamma or qat causes Colorectal cancer	44 (57.2)	36 (54.5)	0.9
Chewing of shamma or qat causes Oral cancer	59 (76.6)	54 (81)	0.08
Is there a Saudi Arabian law that bans chewing shamma and qat advertising and promotion?	53 (68.8)	30 (45.5)	0.01
Is there a Saudi Arabian law that forbids selling of shamma or qat to those < 14 years old?	45 (58.4)	26 (39.4)	0.02
Do you believe that shamma is more harmful	21 (27.3)	3 (4.5)	0.01
Do you believe that Qatis more harmful	15 (19.5)	12 (18.2)	0.2
Is there any of your family member or friends affected with oral cancer	51 (66.2)	55 (83.3)	0.01
If yes, wheather they use shamma or quat	32 (41.6)	18 (27.3)	0.04

Table 3: Questionnaire items on knowledge of students and number of agree responses regarding ill effects of shamma or qat chewing on health by the type of course.

Table 4 gives information regarding attitude and practice of students and number of agree responses regarding quitting of Shamma or Qat chewing. Fifty six (72.7%) and 34 (51.5%) of dental and medical students agreed that Shamma and Qat cause addiction and the difference was statistically significant ($p = 0.02$). However, only 10 (13%) and 7 (10.7%) of dental and medical students tried to quit chewing the Shamma or Qat.

Questionnaire	Dental students (n = 77) n (%)	Medical students (n = 66) n (%)	Chi-square test, p value
Have you ever tried to quit chewing shamma or qat? Yes	10 (13)	7 (10.7)	0.2
Do you think shamma and Qat cause addiction	56 (72.7)	34 (51.5)	0.02
Do you believe that shamma and qat users should quit chewing them	56 (72.7)	46 (69.7)	0.17
Have you tried to advice or help somebody to quit chewing shamma or qat?	23 (29.9)	24 (36.4)	0.7
Are you ready to quit chewing shamma or qat if cessation assistance is provided?	26 (33.8)	19 (28.8)	0.4
Do you think people around you (family members, friends and colleagues) believe that you should not chew shamma or qat?	55 (71.4)	36 (54.5)	0.02
Do you believe quitting chewing shamma or qat improves your health?	52 (67.5)	35 (53.03)	0.01

Table 4: Attitude and practice of students and number of agree responses regarding quitting of shamma or Qat chewing.

Discussion

Our findings indicate an overall tobacco chewing prevalence rate of 35% among dental students and 30% among medical students. This rate is slightly lower than what was reported in previous studies [3,5,6]. The recent systematic review by Alsanosy [8] showed high prevalence (36%) of tobacco chewing among Saudi population and the these results are comparable to the present study results.

Kingdom of Saudi Arabia banned the use of chewing form of tobacco, both shamma and qat since 2006. However, the majority of participants agreed that, it is easy to get the shamma or qat and they get it from the sellers. The study by Alsanosy, *et al.* [6] 90% of the study participants stated that it was easy to get the qat in Jazan province.

Our results revealed that more than 10% of dental students and 9% of medical students initiated using of shamma or qat before the age of 15. In contrast to this few previous studies [3-6] carried out in Saudi Arabia, showed mean age of tobacco chewing initiation was 19 years. However, Alsanosy [8] reported in a review article that the majority of tobacco chewers began chewing tobacco at or prior to the age of 15. Main reason for tobacco chewing in the present study was peer pressure and stress from heavy course load. This was consistent with the findings of previous studies [3,5] where peer pressure and stress were identified as the main factor that triggered.

Majority of the study participants (85%) agreed that tobacco chewing causes serious problem to one's general and oral health. However, only 13% of study participants tried to quit chewing shamma or qat. This shows the negative attitude of study participants towards quitting of tobacco chewing habits irrespective of knowledge that chewing of tobacco causes harmful effects oral and general health including oral and colorectal cancer.

Study Limitation

Because the study is cross-sectional, temporal relationships cannot be determined. Although reporting bias such as social desirability bias, other response bias, and recall bias are potential limitations of survey research, these problems are not unique to questionnaire research. Nevertheless, this study used an anonymous questionnaire to minimize response bias and social desirability bias. We recommend that future researchers conduct a multicenter study to enhance the generalizability, to design a preventive tobacco program for future health practitioners and evaluate the impact of interventions.

Conclusion

To conclude

1. Twenty three percentage of dental student and eighteen percentage of medical students admitted that they chew Shamma and ceremonial occasion was the most common place of use of Shamma or Qat.
2. Most of the subject started to use Shamma or Qat after the age of before the age of 15 years.
3. Most common companion with tobacco chewing was friends.
4. 85% of students knew chewing Shamma or Qat has a serious effect on ones health.
5. 76% of dental students and 81% of medical students knew chewing of Shamma or Qat cause oral cancer.
6. 41% of dental students admitted Shamma is more harmful than Qat compare to medical students (27%) and the difference of statistically significant.
7. 13% of dental students and 10% of medical students admitted that they tried to quit Shamma and Qat chewing.
8. The students' impact on increasing awareness of their community and their role in helping people stopping this harmful habit, was found negative. Thus, it is recommended to apply training programs that aim to prepare healthcare students for their future role in increasing awareness of the community to the dangers of those traditional habits.

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